IN THE CLAIMS:

Please amend claim 1.

1. (Currently amended): A method for processing a primitive defined by at least one vertex in a graphics system, comprising:

comparing the X coordinates for the at least one vertex with X clip values to determine an X clip code, wherein the X clip values correspond to the minimum and maximum X values for the display space scaled to include a horizontal discard clip guard band which is defined as lying within the trivial accept guard band;

comparing the Y coordinates for the at least one vertex with Y clip values to determine a Y clip code, wherein the Y clip values correspond to the minimum and maximum Y values for the display space scaled to include a vertical discard clip guard band which is defined as lying within the trivial accept guard band;

comparing the Z coordinates for the at least one vertex with Z clip values to determine a Z clip code, wherein the Z clip values correspond to minimum and maximum Z values for the display space;

determining if the primitive can be discarded based on the X clip code, the Y clip code, and the Z clip code;

when the primitive can be discarded, discarding the primitive; and

when the primitive cannot be discarded, processing at least a portion of the primitive using a three-dimensional graphics pipeline.

2. (Original): The method of claim 1, wherein processing at least a portion of the primitive further comprises rasterizing the at least a portion of the primitive.

3. (Original): The method of claim 1, wherein the horizontal and vertical discard clip guard bands are based on a dimension of a rasterized area of the primitive.

4. (Original): The method of claim 3, wherein the primitive is a line and the dimension is one-half of a smaller dimension of the rasterized area of the line.

5. (Original): The method of claim 3, wherein the primitive is a point and the dimension is a radial dimension of the rasterized area of the point.

6. (Original): The method of claim 3, wherein the horizontal and vertical discard clip guard bands correspond to an amount of dimensional expansion used for processing primitives.

7. (Original): The method of claim 6, wherein the dimensional expansion corresponds to anti-aliasing operations performed on primitives having at least three vertices.

8. (Original): The method of claim 1, wherein the horizontal and vertical clip guard bands correspond to dimensions corresponding to a predetermined number of pixels.

9. (Original): The method of claim 1 further comprises:

comparing the X coordinates for the at least one vertex with trivial-accept X clip values to determine a trivial-accept X clip code, wherein the trivial-accept X clip values correspond to the minimum and maximum X values for the display space scaled to include a horizontal accept clip guard band;

comparing the Y coordinates for the at least one vertex with trivial-accept Y clip values to determine a trivial-accept Y clip code, wherein the trivial-accept Y clip

values correspond to the minimum and maximum Y values for the display space scaled to include a vertical accept clip guard band;

when the primitive cannot be discarded based on comparison with the X clip code, the Y clip code, and the Z clip code, determining if the primitive is to be processed in its entirety based on the trivial-accept X clip code, the trivial-accept Y clip code, and the Z clip code;

when the primitive is to be processed in its entirety, processing the primitive using the three-dimensional graphics pipeline;

when the primitive is not to be processed in its entirety:

clipping the primitive to produce a clipped primitive; and

processing the clipped primitive using the three-dimensional graphics pipeline.

10. (Original): The method of claim 9, wherein the vertical accept clip guard band is greater than the vertical discard guard band, and wherein the horizontal accept clip guard band is greater than the horizontal discard guard band.

11. (Currently amended): A graphics processing circuit, comprising:

a clip code generator that is operable to receive a clip-space primitive, wherein the clip code generator compares coordinates for vertices of the clip-space primitive with screen space coordinates scaled by a discard clip guard band which is defined as lying within a trivial accept guard band to determine discard clip codes for the clip-space primitive;

an evaluation block operably coupled to the clip code generator, wherein the evaluation block evaluates the discard clip codes to produce a discard decision

included in control information, wherein the discard decision indicates whether the clip-space primitive can be discarded;

a clip processing block operably coupled to the evaluation block and operable to receive the clip-space primitive, wherein when the discard decision included in the control information indicates that the clip-space primitive can be discarded, the clip processing block discards the clip-space primitive, wherein when the clip-space primitive cannot be discarded, the clip processing block selectively performs clipping functions on the clip-space primitive based on the control information to produce a clipped primitive; and

a three-dimensional graphics pipeline operably coupled to the clip processing block, wherein the three-dimensional graphics pipeline processes the clipped primitive to produce pixel fragment data.

12. (Original): The graphics processing circuit of claim 11 further comprises a frame buffer operably coupled to the three-dimensional graphics pipeline, wherein the frame buffers stores pixel data corresponding to the screen space, wherein the three-dimensional graphics pipeline blends the pixel fragment data with the pixel data.

13. (Original): The graphics processing circuit of claim 11, wherein the three-dimensional graphics pipeline includes a rasterization block, wherein processing the clipped primitive includes rasterizing the clipped primitive.

14. (Original): The graphics processing circuit of claim 11 further comprises a transform block operably coupled to the clip code generator and the clip processing block, wherein the transform block is operable to receive an object-space

primitive, wherein the transform block transforms the object-space primitive from object space to clip space to produce the clip-space primitive.

15. (Original): The graphics processing circuit of claim 11,

wherein the clip code generator compares the coordinates for the vertices with clip space coordinates of Frustum clip planes scaled by an accept clip guard band to determine accept clip codes for the clip-space primitive;

wherein the evaluation block evaluates the accept clip codes to produce an accept decision include in the control information, wherein the accept decision indicates if the clip-space primitive is to be processed without clipping; and

wherein when the accept decision indicates that the clip-space primitive is to be processed without clipping, the clip processing block forwards the clip-space primitive as the clipped primitive without clipping the clip-space primitive.

16. (Original): The graphics processing circuit of claim 15, wherein the accept clip guard band is greater than the discard clip guard band.

17. (Original): The graphics processing circuit of claim 11, wherein the discard clip guard band is based on a dimension of a rasterized area of a standard primitive.

18. (Original): The graphics processing circuit of claim 17, wherein the standard primitive is a line, and wherein the dimension is one-half of a smaller dimension of the rasterized area of the line.

19. (Original): The graphics processing circuit of claim 17, wherein the standard primitive is a point, and wherein the dimension corresponds to a radial dimension of the rasterized area of the point.

20. (Original): The graphics processing circuit of claim 11, wherein the discard clip guard band is based on dimension corresponding to a predetermined number of pixels.

21. (Currently amended): A primitive processor, comprising:

a processing module; and

memory operably coupled to the processing module, wherein the memory stores operating instructions that, when executed by the processing module, cause the processing module to perform functions corresponding to processing a primitive defined by at least one vertex, wherein the functions include:

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comparing the X coordinates for the at least one vertex with X clip values to determine an X clip code, wherein the X clip values correspond to the minimum and maximum X values for the display space scaled to include a horizontal discard clip guard band which is defined as lying within a trivial accept guard band;

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comparing the Y coordinates for the at least one vertex with Y clip values to determine a Y clip code, wherein the Y clip values correspond to the minimum and maximum Y values for the display space scaled to include a vertical discard clip guard band which is defined as lying within the trivial accept guard band;

comparing the Z coordinates for the at least one vertex with Z clip values to determine a Z clip code, wherein the Z clip values correspond to minimum and maximum Z values for the display space;

determining if the primitive can be discarded based on the X clip code, the Y clip code, and the Z clip code;

when the primitive can be discarded, discarding the primitive; and

when the primitive cannot be discarded, processing at least a portion of the primitive using a three-dimensional graphics pipeline.

22. (Original): The primitive processor of claim 21, wherein processing at least a portion of the primitive further comprises rasterizing the at least a portion of the primitive.

23. (Original): The primitive processor of claim 21, wherein the horizontal and vertical discard clip guard bands are based on a dimension of a rasterized area of the primitive.

24. (Original): The primitive processor of claim 23, wherein the primitive is a line and the dimension is one-half of a smaller dimension of the rasterized area of the line.

25. (Original): The primitive processor of claim 23, wherein the primitive is a point and the dimension is a radial dimension of the rasterized area of the point.

26. (Original): The primitive processor of claim 23, wherein the horizontal and vertical discard clip guard bands correspond to an amount of dimensional expansion used for processing primitives.

27. (Original): The primitive processor of claim 26, wherein the dimensional expansion corresponds to anti-aliasing operations performed on primitives having at least three vertices.

28. (Original): The primitive processor of claim 21, wherein the horizontal and vertical clip guard bands correspond to dimensions corresponding to a predetermined number of pixels.

29. (Currently amended): The primitive processor of claim 21, wherein the functions further include:

comparing the X coordinates for the at least one vertex with trivial-accept X clip values to determine a trivial-accept X clip code, wherein the trivial-accept X clip values correspond to the minimum and maximum X values for the display space scaled to include a horizontal accept clip guard band which is defined as lying within a trivial accept guard band;

comparing the Y coordinates for the at least one vertex with trivial-accept Y clip values to determine a trivial-accept Y clip code, wherein the trivial-accept Y clip values correspond to the minimum and maximum Y values for the display space scaled to include a vertical accept clip guard band which is defined as lying within a trivial accept guard band;

when the primitive cannot be discarded based on comparison with the X clip code, the Y clip code, and the Z clip code, determining if the primitive is to be processed without clipping based on the trivial-accept X clip code, the trivial-accept Y clip code, and the Z clip code;

when the primitive is to be processed without clipping, processing the primitive using the three-dimensional graphics pipeline;

when the primitive is not to be processed without clipping:

clipping the primitive to produce a clipped primitive; and

processing the clipped primitive using the three-dimensional graphics pipeline.

30. (Original): The primitive processor of claim 29, wherein the vertical accept clip guard band is greater than the vertical discard guard band, and wherein the horizontal accept clip guard band is greater than the horizontal discard guard band.